



**Rejection of claim 6 under 35 U.S.C. § 112, 2nd Paragraph**

Claim 6 stands rejected under 35 U.S.C. § 112, second paragraph, for lack of antecedent basis for R<sup>4</sup> being benzyl. Claim 6 has been canceled, thus rendering this rejection moot.

**Rejections Under 35 U.S.C. § 102 (b)**

Claims 1-5, 11, 12, 24-27, 33, 34, 44, and 51 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Wan (J. of Pharmaceutical Science, 1968, 57:11, pp. 1903-1906). Wan discloses viscosity test results for solutions. Claims 1-5, 11, 12, 24-27, 33, 34, and 51 have been amended to recite a personal care product. The present application states that personal care products include shampoos, conditioners, creams, lotions, cosmetics, and soaps (Specification, page 3, line 21). Wan does not disclose or suggest a personal care product. Accordingly, it does not anticipate claims 1-5, 11, 12, 24-27, 33, 34, and 51.

Claims 1-5, 11, 12, 24-27, 33, 34, 44, 45, and 51 stand rejected under 35 U.S.C. § 102(b) as being anticipated by "Adachi" (JP 10087496). According to the English abstract, Adachi discloses an aqueous solution containing salicylic acid with benzethonium chloride. Claims 1-5, 11, 12, 24-27, 33, 34, and 51 have been amended to recite a personal care product which includes a ketone acid or salt thereof. Adachi does not disclose or suggest a personal care product which includes a ketone acid or salt thereof. Therefore, Adachi does not anticipate claims 1-5, 11, 12, 24-27, 33, 34, and 51.

**Rejections under 35 U.S.C. §103(a)**

Claims 14, 18, 22, 31, 32, 35-43, and 46 stand rejected under 35 U.S.C. § 103(a) as being obvious over Adachi in view of Biedermann (U.S. Pat. No. 6,150,403).

Neither Adachi nor Biedermann disclose the presently claimed preservative system. Furthermore, neither Adachi nor Biedermann disclose or suggest the synergistic antimicrobial efficacy of the presently claimed preservative system. In the present application, it is shown that

preservative mixtures containing, for example, 0.25% sodium dehydroacetate monohydrate (a ketone acid salt) and 0.50% benzethonium chloride achieve a much greater reduction in *S. aureus*, *P. aeruginosa*, and *E. coli*, as compared to 0.5% sodium dehydroacetate monohydrate (a ketone acid salt) or 1.0% benzethonium 1622 alone (see Example 1). Synergism values for a 0.25% sodium dehydroacetate monohydrate (a ketone acid salt) and 0.50% benzethonium chloride, calculated based on the method described by C.E. Kull et al., demonstrates that these two components are synergistic when used in a mixture, as opposed to merely being additive (see page 13, lines 10-26 and Table 2). In other words, the ketone acid salt and quaternary ammonium biocide achieve better results when used together, than the collective contribution of the individual components when used separately. This unexpected effect is not disclosed in either Adachi or Biedermann, and thus these references do not render the present claims obvious.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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